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ABSTRACT

This paper is a preliminary examination of homologous shifts in U.S. discourses of school architecture and "planning" as they relate to curricular reforms and inventions of new pedagogical techniques. The strategy of discursive analysis uses Michel Foucault's conceptualization of "governmentality" to examine discourses on the design and building of schools. The purpose is to question underlying assumptions about "space" and historical reasonings about a place called school. Particular historical junctures in discourses of school architecture provide the contingent conditions and reasonings on which the current debates about reform of school design seem reasonable and make sense. Schematically, they are: (1) the common school discourses of the "school house" during the 19th century; (2) the emergence of the "school-plant," which introduced city "planning" discourses into the discourses of school design during the 1920s and 1930s; (3) the "open-plan" in the 1950s that followed as a critique of the "school-plant"; and (4) the enfolding and redeployment of elements of the "school-house," "classroom school-plant," and the "open plan" in the "school-as-community." (Contains 88 references and 14 endnotes.) (Author/SLD)

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By Lisa Hennon

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Urban Planning and School Architecture: Homologies in Governing the Civic Body and the School Body

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Abstract

This paper is a preliminary examination of homologous shifts in U.S. discourses of school architecture and "planning" as they relate to curricular reforms and inventions of new pedagogical techniques. My strategy of discursive analysis uses Michel Foucault's conceptualization of 'governmentality' to examine discourses on the design and building of schools. The purpose is to question underlying assumptions about 'space' and historical reasonings about a place called school. Particular historical junctures in discourses of school architecture provide the contingent conditions and reasonings upon which the current debates about reform of school design seem reasonable and make sense. Schematically, they are: (1) the common school discourses of the "school-house" during the nineteenth century; (2) the emergence of the "school-plant," which introduced city "planning" discourses into the discourses of school design during the 1920s and 30s; (3) the "open-plan" in the 1950s that followed as a critique of the "school-plant"; and (4) the enfolding and redeployment of elements of the "school-house," "classroom school-plant" and the "open-plan" in the "school-as-community."

Outline

- I. Governmentality as a field of analysis
 - A. 'Space' as an historical-political problematization of population
 - B. Reading the monitorial school as an historical-political problematization
- II. Governing 'at a distance': curriculum, pedagogy, and organization of the school-house
 - A. Joining technologies of power to technologies of the self: curricular design, system of pedagogical action, and organization of the common school.
 - B. Governing 'at a distance' through self-government
- III. School-plant and city planning: taking the "end in view"
 - A. Nineteenth century "plans" for the city and the school-house
 - B. Normative statistics and demographic predictions
 - C. Building the school-plant by 'planning the future'
- IV. Planning for "change?" The in-dividuated space of the school-as-community
 - A. Curricular design, system of pedagogical action, and organization of the school-as-community
 - B. 'Planning the future' through the dividuated self: Developmental inscriptions of the school subject

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With few exceptions, educational and school design discourses construct the space of the school as the empty repository of good (or bad) intentions gleaned from curricular and pedagogical reform discourses. The current push to realign subject matter, such as an integrated curriculum, is attached to pedagogical reforms (such as team teaching and cooperative learning) to provide appropriate instruction for multiple learning styles, multiple intelligences, developmental stages and disabilities. The push coalesces in an argument to build schools as "flexible learning environments" (Petit, 1997; American School & University, 1998; Langone, 1998; Hood-Smith & Leffingwell, 1983; Steubing, 1995).

New floor plans, alone, do not convey the convergence of discursive elements that reorder the school body. Building a "flexible learning environment" requires new networks of relations achieved through re-partitioning and re-distributing rooms, staff, students, furniture and media. According to architectural and educational studies of school building and design, a "flexible learning environment" promotes "active" learning through a sense of "community." A similar reordering of the space of the city through the instrument of "community" provides a new context within which to view the civic body; together, considerations of civic and educative functions converge in the space of the school.

A political dimension is implicit in debates about different designs of the school-as-community. While ideas of architectural design appear to fit educational reforms of curricular organization and instructional methods, the equation of space to its intended physical functions becomes a little harder to justify. With the equation of space to physical functions, school designers encounter difficulties in empirically substantiating claims about the impact of different architectural models on measures of student achievement, self-esteem, and social interactions (Duke, 1998).

Rather than take a position in the debate, I look to some of the underlying reasonings that support current debates about school design and issues of 'active' learning, 'flexible learning environments,' and 'personal' relations in the school-as-community. Disparate psychological discourses of multiple intelligences and learning styles converge with city planning and administrative discourses; conceptual elements of socialization discourses from the early part of this century, such as the intimate and personal "primary group," are remobilized with pedagogical relations of cooperation and collaboration. As an organizing gesture, I characterize current discourses on school architecture as the school-as-community to distinguish it from past conceptualizations to situate it in a field for discursive analysis.

I. Governmentality as a Field of Analysis

The notion of governmentality affords a registering of discursive practices that are neither reducible one to the other, nor are the practices necessarily harmonious or mutually reinforcing (Foucault, 1991; Burchell, Gordon, and Miller, 1991). In using governmentality as

an analytic field, the rationales and practices politicize the space of the school while avoiding claims that current school designs are either more 'free' or conversely, more oppressive.¹ Recognizing multiple uses of the term 'space' provides a way to flush out meanings that frequently are misrecognized, devalued, or omitted in educational reform discourses. Popkewitz (1997) writes that in current scholarship, metaphors of discourse and texts, as well as geographical concepts of 'maps,' 'discursive fields,' 'regionality,' 'localities,' 'terrain,' 'imagined communities' and 'institutional geographies' are introduced in discursive analyses to understand how spatial logics and temporal logics coincide. The attention given to space is not a concern solely with a geographical idea of physical location but also as a way to understand the rules and standards of reason through which the subject is "continually 'made' through the formation of social spaces" (Popkewitz, 1997, p. 23).

A 'discursive space' introduces certain types of questions that entail rethinking ideas of history or progress. Isolating a discursive space makes intelligible the ways in which discourses emerged, appropriated from, joined with, or alchemized existing discourses into hybrid concepts, individuals, things, techniques, and practices. Discursive practices of school building and design are contiguous and concurrent; they emanate from multiple directions out of multiple aims, disputes, and strands of discursive practices, each of which have different trajectories and rates. Analyzing the reasonings of such practices provides a way to describe regularities and ruptures by breaking out of a sense of linear and total history in which inferred causal relations lead to a notion that 'discourse' somehow saturates and binds the space of the school, leaving no room for anything else (see also, Buenfil, in press).

The discursive space of the 'school,' then, refers to the convergence and confluence of multiple discourses that mobilize our reasonings and justifications for educative actions. Therefore, I do not attempt to make a total inventory and catalogue of how all schools 'actually' were or are now being built; nor do I ask questions about what classroom practices 'actually' were or are.² Instead, a discursive analysis emphasizes the fields of representation and the systems of reasoning that inform the design and ordering of the 'school.'

A. Historical-political problematizations of 'space' and population

An enduring reasoning about design has been the deployment of 'space' as a built environment. I read the 'built environment' as an historical-political problematization of space and population. In current educational scholarship, the 'space' of the school is equated with geographic concepts of physical location or context, such as ethnographic, psychometric, and affective studies of the child within the context of the school environment. The very notion of 'physical space' having *a priori* functions and effects is problematic because it suggests a non-culturally specific, ahistorical and naturalistic conception, a conception that is contested, for example, by geographers (e.g., Gregory, 1994; Harvey, 1989; see also Kirby, 1996).

Nor can we assume that the category of space has been overlooked by political reasoning. At the end of the eighteenth century, new conceptualizations in theoretical and experimental physics began to consider a politics of space (see Toulmin, 1990). 'Space' became doubly invested with political and scientific reasonings (Foucault, 1980). One effect of the double investment of space is that engineering sciences were thought of as too technical and too practical to be considered intellectual or philosophical; the technical knowledges were thought of as too remote from social and political reality to be considered political (Barry, 1996). The engineering sciences had a political *usefulness* in liberal discourses by being devoid of political

content. The presumed neutrality of technical/practical knowledges such as engineering enabled the state to stay out of the daily lives of citizens and yet build an infrastructure to organize populational relations.

My purpose for questioning ontological assumptions of 'space' is to question the elision of political discourses and scientific practices that have arisen around the questions of governing populations and bodies; I question the assumptions about 'space' that have enabled liberal governance 'at a distance' (Rose, 1995). The discursive domain of the 'school' or the 'city' has been and continues to be a political reflection upon how to enclose a segment of the population and to order and relate members of the population in an educative or civic way. I am interested, therefore, in those practices that arose from efforts to act upon our sense of locating our body and our mental and physical individualization. Furthermore, I am interested in understanding how shifts in those practices have altered the constructed physicalness of how we locate and identify ourselves. While I refer to the physical arrangements of the school or of the city, they are resituated as historical-political problematizations of specified segments of population with the aim of citizenship. The 'space' of the school or city delineate an area for introducing questions about history, progress, freedom and power.

B. Reading the monitorial school as an historical-political problematization

Numerous studies in educational research have fruitfully used concepts from Michel Foucault (1979) such as "disciplinary society" and his conceptualization of its diagram--the "panopticon"--to politicize the space of the school (e.g. Shore & Roberts, 1993; Heilker, 1994; Deever, 1991). It is helpful to revisit the monitorial school room and the "panoptic" relations that have aroused interest in current research. In the monitorial school room, up to a thousand students were housed under the supervision of student monitors and the school master (Markus, 1993). The goal of the monitorial schools was to form 'good habits,' such as punctuality, proper posture, and standardized body movements. Psychological discourses defined the brain as having different moral and intellectual domains called 'faculties.' By exercising the different faculties under the regimen of the monitorial school, the performance became habitual and rote (Hamilton, 1989).

The curricular design consisted in enumerating a sequence of behaviorally monitored tasks which required three main organizational features in the school-room. First, long writing tables or desks were lined up in a battalion of rows. Secondly, there were recitation circles, sometimes called "draft stations" along the side walls. And finally, since it was impossible to provide books for each student, "lesson-sheets" were posted on the "standard" pole at the end of each row or on the walls. The "lesson-sheets" provided the visual models which were to be copied and memorized by the students. The subject-matter to be learned, and the separate steps in the sequence were class-ified. Students were grouped according to "class" or "standard" which referred both to the place in the behavioral sequence of tasks and to physical placement in the room (Seaborne, 1971). Students learned to locate and identify themselves by 'class.'

During a lesson, the monitor stood at the end of the row, gave the command, and the students in each row were expected to execute the task in unison. With a quick glance, the monitor checked the work and proceeded to the next command. Once a student completed all the tasks of one 'class' he or she was moved to the next 'class' in the sequence.³ For example, in writing instruction, one class was at sand-desks tracing letters; another class sat at long tables writing one-syllable letter sequences on slates; still another class worked on two-syllable

sequences or worked on writing whole words, while the next class filled out copy-books. If the lesson was a lecture or recitation, the students, by class, stood at attention or recited in unison. Instruction in reading, mathematics, moral recitations, recitations of natural laws, or memorized historical narratives were arranged so that upon 'command' students performed the behaviors that constituted learning.

In a remarkable ensemble of organization, design, and action, up to a thousand pupils were ushered out through school doors and into an industrializing world. Social and educational reformers began to object—as the ground of governing discourses shifted beneath their feet—that the monitorial model didn't work. While monitorial schools solved a populational problem by warehousing children and youth, the schools did not solve the problem of liberal government. The shift in discourses registers the incompleteness and mobility of relations of power even as the effects of power were deposited in stone, wood, paper, and iron. Both in England (see e.g. Donald, 1992) and in the U.S., the assumptions and goals of the monitorial schools were ultimately rejected. Common school discourses in the U.S. adopted some elements of disciplinary practices, such as the individualization of pupils into rows of desks, tables, lectures, and recitations, but the discourses mobilized different reasonings about the individual and government.

Foucault's now well-known analysis of the monitorial school in *Discipline and Punish* (1979) has inspired current studies to use conceptual tools such as "panopticism." And while these studies aren't ordinarily found in architectural literatures, they have amplified the analyses of schools through their examinations of spatial relations and power. Important and timely critiques of school social arrangements offer examples of how to make the spatial arrangements of schools more equitable. However, concepts such as the "panopticon" mainly have been appended to 'critical' approaches.⁴ Recent criticisms point to the manner in which "the school allegedly reproduces social relations, by detouring human capacities into the forms required by middle-class hegemony, capitalism, racism, patriarchy and other enemies of complete human development" (Hunter, 1996, p. 144). Frequently, concepts of panopticism or disciplinary power are used to show how students and teachers are disempowered, or how the potential for resistance is undermined, or how discipline and surveillance are destructive to 'true' learning. 'Space' remains at an ontological and phenomenological level.⁵

If we turn attention to practices of 'building a space of educative relations' rather than to a priori assumptions about the built environment, then the field of governmentality provides a number of benefits. Discursive practices of school building and design are contiguous and concurrent; they emanate from multiple directions out of multiple aims, disputes, and strands of discursive practices, each of which have different trajectories and rates. Analyzing the governmental reasonings of such practices provides a way to describe regularities across and within various practices. The regularities are not fixed relations of power but rather, the effects that coalesce at moments of historical juncture.

In the next section, I turn to the juncture in which the problematization of population was tied to questions of liberal governing.

II. Governing 'At a Distance': Curriculum, Pedagogy, and Organization of the School-House

It may be proper to remind the reader, that by education, we understand a system of training and instruction, which aims at the due culture of all the

powers of the soul, both intellectual and moral.

--Alonzo Potter⁶

Frequently, an evolutionary line is drawn from the architecture of monitorial schools to present practices in arguments that are critical of social inequalities and exclusion. The arguments deploy the "panopticon" of monitorial methods as an essentialized model of hegemonic powers in current school designs, such as the open plan that came into vogue in the 1970s. (see, e.g. Markus, 1993). The design of school-houses in common school discourses, however, represents a rupture with monitorial practices, particularly around the issue of surveillance. Certain elements of supervisory and disciplinary relations of monitorial schools were adopted in U.S. common school discourses. By switching to governmentality as a field of analysis, the analysis can register some of the discursive practices of common schools that distinguished it from other popular schooling methods.⁷ More importantly, by switching to a field of analysis that takes the rationalities, practices, and techniques as governing our reasonings about educative action, we are able to identify the spatial arrangements that made government 'at a distance' possible.

A. Joining technologies of power to technologies of the self: Curricular design, system of pedagogical action, and organization of the common school

Technologies of power and technologies of the self organize a framework for analysis.⁸ Technologies of power refer to the ensemble of actions and practices that organized knowledge with the aim of structuring the field of possibilities in which several ways of behaving, several reactions and diverse comportments may be realized (Foucault, 1978, 1983). By technologies of the self, I refer to those techniques by which the individual comes to know the self, the ensemble of actions by which the individual effects self-governing. The relations of power and knowledge have been characterized as the transference of the soul to the governance of science (Popkewitz, 1998). To organize my description of the common school-house, I point to three analytic dimensions of common school discourses: (1) the goals of learning and the organization of subject matter which I call the curricular design; (2) the organization of instruction to produce learning, here called the system of pedagogical action; and (3) the basic units and organization of pedagogical action that constitute spatial relations.

The aim of common schooling was to produce virtuous, self-governing citizens by inculcating "moral character" (Barnard, 1848; Potter and Emerson, 1842). In contrast to training for "blind obedience," Horace Mann argued that "[o]ne of the highest and most valuable objects, to which the influences of a school can be made conducive, consists in training our children to self-government (excerpted in Cremin, 1957, p. 47). The design of the curriculum was intended to inculcate "understanding" and "moral character" rather than "useless" memorization and scholarly recitation (Alcott, 1832; Potter & Emerson, 1842; Mann, 1845; and Barnard, 1848).⁹ Discursively, the combination of faculty psychology with moral philosophy emphasized intellectual powers, habits of thinking, judging, reasoning, and communication (Hamilton, 1989, p. 87). The student "must be instructed by reflection on the operations of his own mind" (Potter & Emerson, 1842, 274-275).

The design of the curriculum was believed to have a proper sequence of instruction in the different subjects, but to fully develop the faculties, knowledge needed to be subdivided into increments in a way that a child could 'understand.' Curricular organization was difficult because 'class' referred to the various books on grammar, geography, or history that students

brought with them to school. A teacher might have been responsible for as many as fifty or sixty 'classes' (i.e., books) which led to the impossible obligation to purchase and study a copy of each school book, and the even more impossible task of hearing fifty or sixty individual recitations. Pedagogical organization wasn't just a problem of organizing the various subject-matters. There were also different publications. In reference to the problem of too many "class-books," Potter writes that in one state study, there "were *more than two hundred different schoolbooks*" for spelling, reading, arithmetic, geography, history, grammar, natural philosophy, and "other branches" (Potter & Emerson, 1848, pp. 228-229, original emphasis). In a problematization of population and government, reformers recommended the adoption of 'appropriate' school texts, arranged in a series to consolidate the number of classes (Potter & Emerson, 1842; Mann, in Filler, 1965).

Common school discourses recommended a system of pedagogical action that I refer to as an interrogatory-conversation, in contrast to an 'upon command' instructional technique. In order to inculcate understanding, the teacher was encouraged to engage in conversation about the subject matter with the student and to "lead him [sic] to ask, as well as answer, questions; and be careful not to let your own words lose their animation, and become mere lecturing" (Potter & Emerson, 1842, p. 407-408). To illustrate the system of pedagogic action that I call an interrogatory-conversation, I use Emerson's directions to teachers in the following manner. To exemplify the benefits of conversational and questioning techniques, Emerson chose one of the more difficult geography lessons, stated as this axiom: "The annual revolution of the earth round the sun, in connexion with the obliquity of the ecliptic, occasions the succession of the four seasons" (Potter & Emerson, 1842, pp. 408-409). The practice of having students memorize and recite natural laws 'upon command' was concurrent to Pestalozzian pedagogical strategies that emphasized simple conversational language. Emerson described the beginning of the lesson like this:

What are the seasons?" you [the teacher] may ask. "All who know may hold up their hands." All hands are up. Some individual is told to answer, and says, "Spring, Summer, Autumn, and Winter." What is meant by the succession of the seasons?" [An individual is called upon] "First comes Spring; then Summer; then Autumn; then Winter." "What is the difference in the seasons?" [Another individual is called upon.] "In Summer it is very hot." "And what is it in Autumn?" (Potter & Emerson, 1842, pp. 408-409).

Emerson then explained how successive lessons would build upon understanding and reinforce memory. Common school reformers advocated an interrogatory-conversational pedagogy to go beyond the limited information taught by simple memorization and recitation.

The above excerpt also helps to illustrate how the basic pedagogical unit in a system of interrogatory-conversation was the individual student within a 'class': "A teacher well versed in the better modes of instruction, which are beginning to be adopted, will, in most branches, *teach each one, of a class of twenty*, more in the same time than he could teach any one individual of the same class" (Mann, in Filler, 1965, p. 68, my emphasis). The *simultaneous* instruction of twenty individuals did not necessarily require that all members of a class respond in unison; rather, the emphasis was upon gaining and holding the simultaneous attention of all pupils through teacher questioning so that both listeners and speakers learned (Hamilton, 1989, p. 105).

The basic pedagogical unit was the student, and the basic organizational unit was the school-room that held several 'classes.'

Grouping students in classes for study, recitation, and simultaneous instruction required new organizational methods. One option was the popular school method in Germany organized around the *Facher* system. Large towns could support a *Facher* system of having multiple teachers in separate rooms for separate studies, such as writing, reading, geography, history, mathematics, and music teachers (Potter & Emerson, 1842; see also Barnard, 1848). However, the system of separating subjects in different rooms could not be used in more sparsely populated country districts in the U.S. More importantly, reformers feared that teachers of only one subject would "feel too little responsibility for the moral culture of their pupils" (Potter & Emerson, 1842, p. 224).

B. Governing 'at a distance' through 'self-government

Technologies of power and technologies of the self joined the ensembles of surveillance and discipline to strategies of questioning and conversing. Since the teacher could not look directly into the character of the child, "we must take advantage of the conclusions to which [children] have come from *the study of their own character* (Potter & Emerson, 1848, p. 274, my emphasis). In this reasoning, an interrogatory-conversational pedagogical system constituted intellectual and moral capacities of the "soul" that could only occur through the cultivation of character, through techniques of reflecting upon one's self, to studying the self for understanding, to studying one's character.

The reasoning that governed common school discourses did not originate with the reformers, but rather, the rationalities, practices, and techniques emanated from multiple sources, from multiples knowledges, architectural designs, and organizational strategies. The historical-political problematizations in common school discourses built the school-house as a governmentalized space.

While maintaining devotion to principles of local control and individual states rights, common school campaigns devoted their efforts to encouraging local interest and "enlightenment" (Mann, in Cremin, 1957). The assemblage of educational manuals for teachers (e.g. Potter & Emerson), the publication and distribution of essays (e.g. Alcott, 1832), and the compilation of school-house plans to be distributed to school districts (e.g. Barnard, 1848), enabled 'governing' with the absence of state intrusion in to local control. Governing 'at a distance' meant that the effects of power produced an ensemble of practical knowledges, scientific studies, communication systems, and moral pedagogical techniques to carry "enlightenment" to the local level and to lodge it in the individual.¹⁰

III. School-Plant and City Planning: Taking the "End in View"

As school districts started to build multi-room classroom schools at the turn of the century, the classroom school became more prevalent than the school-house. By the 1930s the emergence of discourses of the school-plant represented a shift in reasonings that had to do with a reproblematicization of population and governing, and with the emergence and 'merging' of building discourses with discourses of city 'planning.' An alchemy occurred as the discourses of educational science and organization merged with 'planning' discourses. In this section, I focus first on the homologies of city and school-house 'plans' and then move to how the merger of

discourses effected techniques and practices to systematize, serialize, standardize, and eventually, to individualize school-plants.

A. Nineteenth century 'plans' for the city and the school-house

During the nineteenth century, both discourses of the city and of school architecture were concerned primarily with anchoring population to land in a way that would be easiest to govern populational vitality (Osborne, 1996; Boyer, 1983). I argue that practices of building cities and schools were 'homologous' to identify the resemblances of practices, across scales, that arose from shared reasonings about health and populational density--independent of individual consciousness--about how to organize segments of population (see also Bourdieu, 1992).

Discourses of the eighteenth and nineteenth centuries joined consideration of the 'city' to aims of governing through medical topographies of cities and regions. Sanitary surveys inspected every street, lot, building, privy and cistern, to draw up a sanitary profile which precisely located infectious diseases and suspicious environmental conditions; the profiles were used to track the spread of disease and target areas for civic improvement projects (Peterson, 1983). The installation of sewers, the straightening of streets, and the setting aside of parks for outdoor exercise during times of leisure were the blue-prints for organizing city populations. An economy of populational vitality was ordered in discourses of land-development and national prosperity (see also, Haar, 1959) with especial attention paid to 'spreading out' the population (Krueckeberg, 1983).

An examination of nineteenth century city plans shows that discourses of architecture helped organize the knowledge of building cities into idealized models. However, there was no definite boundary to how or where a city could grow. In this sense, the city 'outgrew' its original 'plan' and it wasn't until the late 1800s that city 'plans' began to prescribe where and how a city could eventually grow (see, e.g. Reys, 1965; Boyer, 1983; Warner, 1972).

Similar to 19th century discourses of the city, discourses on school architecture emphasized the health of the school population (Alcott, 1832; Barnard, 1848; Mann in Filler, 1965). However, with a concern for health, built structures had automatic boundaries to the growth of its population; or at least common school reformers campaigned for uniform limits on populational density of school-rooms. The important problematization of population of schools was to maintain and improve upon the vitality and proper growth of the child. The discourses of school design incorporated medical and engineering knowledges into the school-house plans. For example, Alcott (1832) calculated dimensions of the school-room based on illumination sciences, respiratory rates and the volume of air the room could safely ventilate. Available techniques for cooling, heating, and 'sunbathing' a room to disinfect its air were included in building recommendations.

The reasoning for the city plan and the school-house plan did not differentiate their 'spaces' in ways we would recognize today. For instance, the structure of the common school-house was undifferentiated from other structures in architectural discourses. Classified as a "minor" building or "house," along with other "domestic" structures, the undifferentiated structure of the school-house was outside a national domain of "public" architecture; local builders worked from basic sets of plans for "dwellings" (see, e.g., Kimball, 1922; see also Bicknell, 1870).

A. Normative statistics and demographic prediction

The systematization and serialization of school-houses into age-graded classroom schools was contingent upon the rise of psychometric discourses of intelligence, psychological discourses of developmental age and behaviorism, and managerial discourses of Taylorism.¹¹ Social reasoning conflated "the general concept of 'society' with the empirical phenomenon of territorially bounded social practices" of the nation (Wagner, 1994, p. 30). The age of the individual student placed the student in a field of normative reasoning that both located the student within the school and prescribed educative action, thereby justifying the classroom design model, and also providing the scientific justification for serializing schools into a linear age-graded system (see, e.g., American School and University, 1928, for the ways in which educational sciences and 'school-age' are taken for granted). Teachers, classes, and rooms moved into a one-to-one relationship in which a teacher became in charge of a single 'classroom' in contrast to the previous school-room (Hamilton, 1989). The "primary unit of a school building is the classroom" (Dresslar, 1925, p. 11) while the basic pedagogical unit remained the individual student. A temporal logic was imposed upon these arrangements: an entire class was promoted to the next class on an annual basis. Students learned to identify and locate themselves by "age," "class," and "school."

To achieve a system of building schools to fit the current and future ages of the student population depended upon design and construction norms (Dresslar, 1925). One of the main construction standards had to do with classrooms within a building, and with different ages broadly differentiated as 'elementary' and 'secondary.' Educational designers argued that elementary classrooms should be of uniform size and orientation; the secondary school, on the other hand--as a modification of the *Facher* system--should vary the room sizes to fit different subject-matter and the variable enrollment in specialized studies, such as work shops and chemistry labs (American School and University, 1928).¹² At the same time, the school-plant encompassed other functions by delineating areas to include cafeterias, auditoriums, gymnasiums, and athletic fields--none of which were areas advocated for all schools in early common school discourses. The ratio of class-size to efficient teaching was calculated and a school time-table was devised so that rooms would not remain vacant for too long (The American School and University, 1928). The standards pertained to a variety of populational "health" standards such as classroom dimensions, the arrangement of athletic fields, acceptable density levels, and fire protection; the adoption of standards provided a normative system of building schools (Dresslar, 1924; Holy, 1935; Sohn, 1947; Strayer, 1928).

The location of the school has been a perennial concern, and location came under normative reasoning and demographic prediction in the 1930s. For early common school discourses, the problem of location had to do with topographical dangers, such as locating the school-house too close to major roads and streets or in swampy, low-lying areas that were prone to flooding (Barnard, 1848). While topographical dangers continue to be of concern today (translated as environmental risks), early twentieth century practices brought a social statistics of city-population and municipal zoning laws into their calculations for locating schools.

Models of city 'growth' emerged as a way to correlate biological pathologies to areas of the city (Glazer, 1984). The Burgess Ecological Model conceived of cities as following a general and statistically regular pattern of populational movement: from *segregation*, *invasion*, *conflict*, and *succession*. The model provided a justification for zoning laws that separated out and protected 'residential' areas from commerce and manufacturing. Discourses of city planning identified and policed the partitioning of the city into manufacturing and industrial zones,

commercial and banking zones, civic zones of public buildings (the courthouse, the house of records, the post office) and residential zones.¹³ School districts were vulnerable to the priorities of city government and it made no sense to educators to locate the school in a neighborhood if city planners were going to direct city growth elsewhere. Educational planners began to coordinate the building of school-plants with city planning.

B. Building the school-plant by 'planning the future'

Discourses of designing and building schools began to join with engineering and demographic discourses of city planning (see, e.g., Holy, 1935; Viles, 1948; Herrick, 1956). Planning and managing discourses adopted the technical rhetoric of the physical sciences to reason about and direct policy (see, e.g., Friedmann, 1993; Boyer, 1983). Social theory 'laws' began to be cast into a statistical lexicon that reshaped descriptive modes of reasoning about the school building or about the city. Demographics of ethnicity, occupation, marriage, or age created statistical regularities as populational 'groups' and cleared social space of ambiguities (Wagner, 1994). It became possible to correlate 'social groups' to other social measures (such as 'intelligence' and birth rates), and to make predictions. A statistics of social difference relocated members of the population in new administrative identities.

Two contrasts between discourses of school-plant *planning* to discourses of school-house *plans* can be made, one with regard to the rise of social statistics for governing population; and the other having to do with notions of historical change.

In a 'merger' of school-plant planning and city planning, surveys of school-plants differed statistically from earlier studies. One advocate of "planning" argued that "qualitative" reports were not enough, and he urged the adoption of "objective" data collection (Holy, 1935, p. 27). School-plant planning discourses reasoned that the demographic data about the school and neighborhood should be tabulated in the "planning" process. The charting of information included populational density, the number of families, the ages of children, rates of residential turn-over, modes of transportation, and calculations of ideal distances to coordinate the series of schools for a given school district.

The aim of planning was tied to a shift in reasoning about historical change and progress. Rather than restrict planning to the immediate future, which characterized earlier educational reports on school-houses, it was argued that schools needed a systematic program:

School plant planning is an effort to draw up a *continuous long-term program in the light of population trends, growth and expansion of the city, financial capacity of the community, and growing conceptions of the place of the school therein--with the end in view of securing maximum safety and educational possibilities for children, and providing maximum service to the community* (Holy, 1935, p. 3, my emphasis).

While reformers of the common school looked to the past, to a heritage and lineage of achievements of civilization which the common school was intended to express, school plans were simply the blueprints for immediate construction and 'improvement.' By the 1930s, in a 'future' discourse of planning, the "end was in view." The future was thought to be rationally plan-able and manageable as long as there were a "long-term program" in the files of every educational planner.

Stated differently, there were different temporal logics in discourses of a 'plan' and of 'planning. Common school discourses thought of the past as having necessary relations with the present, constituting a line of development between *past* and *present*. The goal was to improve upon the present. In planning discourses, the temporal logic posited a *necessary future* along the continuous line of development in which the goal became one of prediction and management. The purpose for studying the past and present in planning discourses, unlike plans for the school-house, was to discover the natural and developmental laws by which to reach policy decisions and to organize actions.

There are three main implications of the shifts in governmental reasoning. First, a shift in temporal logics of planning informed the spatial logics of temporally ordering the sequence of school buildings in 'space.' It wasn't inevitable or 'natural' for schools to be built as a series of age-graded buildings, arranged in sequence, and delivered to the right neighborhood location. The presumed naturalness of school building practices was questioned by concurrent concerns in social discourses of cohesion, harmony, and a respect for the individual as a unique contributor to social progress (Franklin, 1986; Kliebard, 1992). 'Planning the future' conflicted with concurrent aims of schooling

Furthermore, meritocratic arguments asserted that movement through a linear curriculum was believed to be unresponsive to the merits and interests of the individual student if promotion of whole classes was the only way for the individual to advance (Hamilton, 1989). By the 1950s, discourses of "individualized instruction" and the open plan school advocated different design features so that "innovative" and "experimental" teachers would be able to provide instruction to fit individual interests, talents, and needs (Perkins, 1957). In a direct criticism of a system of school-plant building, one educational designer wrote:

[O]f all the vices of traditional school design, the one which most acutely galls the experimental educator today is the constraining effect on the educational program itself. "A school house is a big box filled with the equal-sized little boxes called classrooms," wrote one educator in a passage which has become the touchstone of reform in school design. "The very architecture sorts the children. It helps the administration to establish groups of uniform size--25 pupils if the community is rich, 35 if it is poor, and 50 if it doesn't care. In each box is placed a teacher who will be all things to all children all day all year" (Gross & Murphy, 1968, p. 15).

I read the shift in emphases not as an historical step of progress, but rather, the criticism of the classroom school-plant points to the inessential relations of "development" and the spatial relations of the 'built environment.' A reproblematicization of population at mid-century is picked up by current discourses of the school-as-community. The historical-political problematicization of the classroom school-plant enfolded previous conceptualizations of learning and understanding in which the individual was the basic unit of pedagogical action.

A second implication of the shift in reasonings about the school is that the effort to standardize and programmatize the planning of schools, evident in other discourses of planning as well (such as regional planning or curriculum planning), solidified a constructed notion that space is stable. Ironically, construction standards were adopted with the 'flexible' use by future generations in mind. The functional, ontological notion of space provided the platform upon

which temporal logics were free to roam, envision and plan a future (see, also, Popkewitz, 1997, for a social epistemology of educational research). The arrangement of classrooms in an age-graded developmental sequence, the arrangement of school buildings in a developmental sequence, and the demographic predictors of populational development--as a knowable 'future'--became a space that educational discourses could take for granted.

And finally, it is important to recognize that while discourses of development have been problematized in various fields such as history, sociology, and the physical sciences, the idea of development within an unchanging space remains a cornerstone of educational reasoning, although not without significant modification. While I have focused in this section on the reasonings and practices that have gone into the building of the school-plant as converging in discourses of 'planning' futures, in the next section I focus on the shift in governmental reasonings that have "dividuated" the space of the school. Discourses of school building and design are contingent upon the variety of ways in which the development of the student--in the alchemy of 'planning'--became the assumed way to 'plan the future' of the individual. In terms of historical relations, the classroom school and the open plan are deployed in discourses of the school-as-community. And while the normative reasonings in discourses of the school-plant have not disappeared, they have been enfolded into the building of "flexible learning environments."

IV. "Planning for Change?" The In-Dividuated Space of the School-as-Community

The label of school-as-community does not refer to a model because the discourses of flexibility and active learning encompass at least three architectural models from past practices: the "open school," the "pod school" and the "classroom school" (e.g., Goldberg, 1991). Each of the models is thought to serve at least some aspects of flexibility and active learning in a school-as-community. Let me briefly describe each model.

The open school has few built-in features; instead, furniture, storage carts and partitions are movable fixtures and modules by which the space quickly and easily can be partitioned and sub-divided into a 'flexible space' of open and enclosed areas to fit the day-to-day changes in student groupings and activities. There are no corridors in the open school; modifiable circulation paths are meant to carry students directly from one activity to another to diminish the amount of 'non-educational' time and to expose students to a variety of opportunities in the school community to actively learn (Moore & Lackney, 1994; see also Pearson, 1975, and Propst, 1972, for earlier articulations of the "open plan").

The pod school is discussed as a way to subdivide large, densely populated schools into smaller, more personal, and varied groupings that allow a sense of community to flourish (Goldberg, 1991). Frequently, the arrangements of school space in the pod school are described as a "town" or "community" in which "streets" replace the former "corridor." Rather than efficiently circulating the school population to their proper destinations through hallways, school "streets" are used as common areas to congregate, socialize, and to display student work. Names of "streets" help arrange the school into "neighborhoods" and "home-like" classroom suites. The intent is "to create an intimate scale that promotes interaction and cooperation amongst students and teachers" (Steubing, 1995, p. 53).

And finally, the classroom school is usually described as the traditional or conventional model in which an administrative center is winged by corridors lined with classrooms of uniform size and orientation. The classroom school is divided into age-grade and subject-matter

classifications. Often scorned and despised as the "egg-crate" plan or the "big box," the classroom school remains a viable and valued model for holding a group of children together to form a 'classroom community' in reform discourses of "inclusion," "multi-age" and "mixed-grade" classifications and groupings (Goldberg, 1991; American School & University, 1998; Reisberg, 1998). The problems of using space flexibly to provide for active learning and for promoting community relations beyond the classroom frequently are resolved in discourses of technology in which electronically mediated instruction reorganizes the classroom (e.g., OECD, 1996).

Regardless of contrasting spatial configurations, the school-as-community is conceptualized as a "flexible learning environment," which includes "planning for change." Goldberg (1991) articulates a common concern in the literature when he writes that the school for "this generation of future citizens and workers is being built by an already vanished past" (p. 2). The concern is to build 'the future' into the present. The aim of schooling is to promote active participation and learning by providing the physical conditions that foster in students and staff a sense of having a personal stake in the school. 'Space' in the school-as-community is relatively apolitical, and yet, paradoxically, the space of the school is believed to be endowed with the capacity to realize the many aims of reform (but in the next century).

A. Curricular design, system of pedagogical action, and organization of the school-as-community

School-as-community discourses have retained ontological assumptions about the 'space' of the school. The assumptions are important to understanding how the citizen as subject is continually made and remade through the 'forgotten' problematizations of the 'space' of the school as a link between rationalities to govern and reasonings about population. I turn to some of the underlying reasonings that support current debates about school design and issues of 'active' learning, 'flexible learning environments,' and 'personal' relations in the school-as-community.

I take again as my framework the linkages between technologies of power and technologies of the self to describe three analytic dimensions: (1) the goals of curricular design; (2) the system of pedagogical action; and (3) the basic units and organization of pedagogy that constitute spatial relations. It is helpful to recall that in discourses of common school-houses, the aim of schooling was to train children to self-government. The organization of the subject knowledges was in increments of 'natural' understanding with the goal of inculcating "self-cultivation" of "character." The system of pedagogic action was directed to the individual student--in simultaneous instruction--through interrogatory-conversational techniques. The discursive -practical reasonings in an interrogatory-conversational pedagogical system constituted intellectual and moral capacities of the "soul" that could only occur through the cultivation of character, through techniques of reflecting upon one's self, to studying the self for understanding, and assessing one's character.

Today, the discursive-practical reasonings enfold the common school goals into a "flexible learning environment." Recent analyses of the techniques, strategies, and reasonings that govern educative action can be contrasted to common school-house discourses (e.g. Fendler, 1999; Hammerberg, 1999). The aim of schooling today can be characterized as teaching students to be goal-oriented, active, flexible, cooperative, and to invest themselves emotionally and personally in the community both inside and outside the school.

The curricular design depends upon the construction of new 'inner' dimensions and capacities that have been identified in sciences of developmental psychology. Since the 1960s,

the psychological study of a relatively narrow field of biological age-based stages of intellectual development has opened out to include a diversity of 'inner' aspects--of being human, of being educated--that can now be described, measured and instructed (Fendler, 1999). Educational experts can now assess and arrange on developmental charts an array of attitudes, levels of self-discipline, personality, emotional intelligence, fears, wishes, and aspirations. In turn, sciences of the inner self have become the way to derive "developmentally appropriate curricula." During periods of assessment and during the moment of pedagogical action, a developmental 'profile' locates the student in a revised field of normative reasoning that both locates the student within the school and prescribes the 'necessary' educative actions.

The system of pedagogic action can be both compared and contrasted to the interrogatory-conversational techniques of the common school discourses. The techniques thought to be appropriate for 'active' learning can still be described as interrogatory-conversational, but the substance of the questions have changed and the system of pedagogic action is reorganized. Recalling the axiomatic geography lesson on the "four seasons," the substance of the questions had to do with what the children already knew about the seasons, upon which the teacher introduced the next increment of understanding. In current pedagogical discourses, such as constructivist pedagogies or "metacognitive monitoring," the student is asked to reflect upon and explain the personal reasons for giving an answer. Assignments to do autobiographical writings and journals, or assignments to identify with and assume the perspective of a character in a story, asks students to understand themselves as having fears, wishes, aspirations, attitudes, and to see themselves as unique individuals in a community of learners.

The system of pedagogic action is reorganized so that the pedagogical technique 'fits' the developmental profile of the student. For instance, in literacy instruction, the developmental model identifies the reader as "emergent," or "beginning," or "mature." "[I]f readers are presumed to 'develop' through these stages, it has less to do with the 'nature' of literacy acquisition and more to do with a history of educational thought and knowledge about 'the student'" in relation to the history of 'literate practices' (Hammerberg, 1999). The developmental level of a particular capacity or skill of the student dictates the pedagogic action. In current discourses, there are debates about appropriate pedagogical strategies for 'lower' levels of development versus 'higher' levels. Strategies of "direct instruction"--thought by some researchers to be appropriate for the 'delayed' reader-- is often compared to whole language or constructivist strategies for the 'normal' reader (e.g. Cassidy & Wenrich, 1998/99; Harris & Graham, 1993). Direct Instruction is similar to the 'upon command' pedagogies of the monitorial method in which students memorize a response and produce the response on cue.¹⁴ Conversely, the argument is made that some strategies are prematurely relegated to 'low-level' skills, and that strategies such as "direct instruction" can be profitably used to instruct 'higher order' skills, such as critical thinking (e.g. Kolstad, Briggs & Hughes, 1992). Despite their differences, the debate takes as its common ground the assumption that pedagogical strategies should fit the developmental stages of the student.

This is not to suggest, therefore, that all pedagogical practices have shifted or that there is consensus on strategies considered to be appropriate in the school-as-community. My point isn't that research ought to find some way to resolve the debate. Rather, I suggest that we look at a shift in the basic pedagogical and organizational unit that constitute the physicalness of the school. In the school-plant of the 1930s, norms were calculated as a way to organize a

population into a sequence of individuals. In a normative field that allowed individuals to be compared, not only to one another in a 'class' but to 'classes' in an entire school system, and by extension, to a national population, the individual was positioned within a system of differentiation that at the same time prescribed pedagogic action--by age. Today the normative field has shifted.

B. 'Planning the future' through the dividuated self: Developmental inscriptions of the school subject

The current shift entails a different problematic shaped by the confluence of discourses in the school-as-community. The turn to a local and more personal 'community' as a way to frame social issues is not limited to educational discourses but also can be found in social theory, political sciences, and urban planning (see, e.g., Morris, 1996). Moreover, the turn to 'community' encompasses rationalities that are not peculiar to any nation, but rather embodies a wider ethos and rationale of government (Dean, 1995; Istance, 1997). The site of 'community,' as Nikolas Rose argues, is a discursive space of new moral relations in which individuals have obligations and allegiances to multiple and heterogeneous communities (Rose, 1995, 1996). 'Community' becomes a micro point of management of a variety of overlapping networks which are no longer anchored in the physical space of land nor in the ordered space of society.

Related scholarship notes changes in the ways in which population is problematized. The most recent shift away from a highly ordered society has been characterized as a "de-differentiation" (Wagner, 1994; Lash, 1990), or as the "active" society (Dean, 1995). As the changes pertain to the space of the school-as-community, in which the emphasis on multiple groupings sorts students along a variety of developmental parameters, the basic pedagogic unit is no longer the individual student and the basic organizational unit is no longer the classroom.

The change can be characterized by Deleuze's (1992) notion of "dividuation." The basic pedagogic unit of the school-as-community is somewhere 'in' the individual that teams of teachers monitor, locate on charts of developmental progress, and make grouping decisions on a day-by-day or week-by-week basis. The "individual" is further "dividuated." The shift to 'community' in the school-as-community occurs concurrent to the *dividuation* of the school subject. 'Community' becomes a problematic of governing at the moment when conventional spatial arrangements of the classroom school-plant (that held groups of students together all year under the instruction of the same teacher) have 'opened' out into a "flexible learning environment."

However, the idea that the space of the school-as-community has become de-differentiated, active, and flexible, does not necessarily imply a new openness and freedom from regulation. It is important to recall that in discourses of "planning" the school-plant in the 1930s, the assumption was that uniform room sizes and school designs would insure that schools could be flexibly used by future generations; standardization of school design is now the very practice that current discourses of school design assume they are rejecting. Curricular, pedagogical, and architectural discourses of the school-as-community inscribe new developmental lines of differentiation to govern educative actions. Thus, there are contiguous and concurrent practices--between which there is considerable debate--but the assumptions and reasonings underlying the claims have to do with a shift in governmental reasonings.

Using governmentality as an analytic field registers the ways in which practices were and are neither reducible one to the other, nor mutually reinforcing. Relations of power are far less

fixed and predictable. It bears repeating that the analysis breaks out of a sense of linear and total history in which inferred causal relations lead to a notion that 'discourse' somehow saturates and binds the space of the school into a plate-glass and concrete straight-jacket. Historical relations arise from multiple directions and trajectories, for the reasonings that govern current discourses do not originate with the reformers and designers, but rather, the rationalities, practices, and techniques emanate from numerous sources, from multiples knowledges, architectural designs, and organizational strategies. One implication of 'planning' then, is that when successive generations of planners re-plan the plans of the past, the discourse of 'planning' insures, paradoxically, that the 'future' is unpredictable. The unpredictability of the future is neither reassuring nor catastrophic; it casts attention back onto a 'present' and a constructed 'past' from which a 'future' is deployed.

The historical-political problematizations of the school-house in the 1800s built the school-house as a governmentalized space. Today, the 'space' of the school-as-community is remaking self-government, remaking the citizen. The recent descriptions of "flexible," "active," and "de-differentiation" of social relations in the 'space' of the school can be read as a relocalization of the effects of power. "Freedom," in this sense, traverses the same terrain as power. An effect of this recognition leads to the question: how are we made 'free' (and not 'free') differently in the discourses of school-as-community? Power remains 'invisible' in the assumptions we bring to the questions we ask--including my own--about the 'space' of the school and how we build it.

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Endnotes

¹ Michel Foucault noted changes in governmentality and warned against an historical approach that would conceptualize change as a totalizing shift:

Accordingly, we need to see things not in terms of the replacement of a society of sovereignty by a disciplinary society and the subsequent replacement of a disciplinary society by a society of government; in reality one has a triangle, sovereignty-discipline-government, which has as its primary target the population and as its essential mechanism the apparatuses of security (Foucault, 1991, p. 102).

² It is important to acknowledge that geographically, discourses of the common school during the 1800s emerged primarily from the northern and eastern tiers of the U.S. This is due partly to the settlement patterns and demographic shifts leading up to the American Civil War (see, e.g., Meinig, 1986, 1993). More importantly, I read the discourses as articulating local and particular practices as the universal principles of schooling as a means for promoting self-government, universalized principles which continue to govern reasoning about schools.

³ Boys and girls sat on different sides of the rooms; the curriculum bifurcated at 'higher' classes. While very important, the gendered organization of schooling is beyond the scope of this paper. See Abigail Van Slyck's (1996) study of gender and library architecture of the late 1800s.

⁴ I make a distinction between an exemplary critique, such as Foucault's deployment of "panopticism" to identify a modality of power, and a normative critique which seeks an authoritative ground upon which to evaluate and legislate practices and modes of freedom

(Owen, 1995). The inverted commas around the word critical are intended to indicate a suspension of assumptions that tie 'critical' to legislative critiques.

² Jonathan Crary historicizes phenomenological assumptions about eye-sight in *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, 1993. With regard to architectural discourses, Foucault cautions against a technological determinism in ontological assumptions about architecture as being an exact mirroring of relations of power (1984, p. 255).

⁶ *The School and the Schoolmaster*, 1844, p. 91.

⁷ Since it is Foucault's (1979) analysis of the monitorial school that lends itself to 'critical' analyses of school design, I mention only the monitorial school. Other school models, such as gallery school-rooms, infant schools, and mutual methods were in operation (Barnard, 1848). Seaborne (1971) and Hamilton (1989) give detailed analyses of the different curricular and pedagogical practices among the variety of schools in the early 1800s.

⁸ For educational applications of governmentality, see Popkewitz and Brennan (1998).

⁹ This is not to suggest that all common school reformers agreed on how to promote understanding or character. In 1831, the American Institute of Instruction invited essays on the question of whether children should be required to commit to memory what they do not understand, or children should "attend first to a brief outline of a study, and then gradually to fill up that outline" (Alcott, 1831, p. 65).

¹⁰ Elsewhere I have analyzed the discursive inscription of 'local' and 'national' relations in which visions of the 'local' came from particular New England practices and became the governing principles for mapping, peopling, and settling the North American continent during U.S. imperial expansion (Hennon, in press).

¹¹ See, Fendler (Dissertation, 1999, UW-Madison), for a discursive analysis of behavioral and developmental discourses as they relate to pedagogical strategies and measurement. I thank her for our personal communications on these issues.

¹² Dresslar (1925) insisted, however, that the ready-made plans built by "hatchet-and-saw carpenters" (p. 92) could not fit the needs of all schools. Regional differences in climate, light, and local materials dictated, he argued, the study of the school building always from "the educational point of view" and with the assistance of a professional architect (p. 94).

¹³ The ecological model of city growth also underwrote the reasonings about ethnic and racial segregation and perpetuated the "slum" until criticisms of the 1960s changed the terms of debate about city and school planning (Hennon, in press).

¹⁴ I thank Dawnene Hammerberg for sharing with me some of the more nuanced debates about literacy and drawing my attention to "Direct Instruction" manuals that replicate command-driven systems of pedagogical action.